

Subject Index to Volume 18

A

- Acetylcholine-activated inward current induces cytosolic Ca^{2+} mobilization in mouse C2C12 myotubes, 41
- ADP, binding of, to SR Ca^{2+} -ATPase in the absence of Mg^{2+} is specifically inhibited by thapsigargin, 557
- Alpha-adrenergic agonist and endothelin-1 induced intracellular Ca^{2+} response in the presence of a Ca^{2+} entry blocker in cultured rat ventricular myocytes, 515
- Alveolar epithelial type II cells (rat), inhibition of secretion from, by the cell permeant calpain inhibitor II, 1
- sacs share some but not all characteristics with sarcoplasmic reticulum (Paramecium), 87
- ATP and vasopressin in fibroblast cultures, human cytomegalovirus modulates the Ca^{2+} response to, 111

B

- Ba^{2+} , Sr^{2+} and Ca^{2+} , glucose induces oscillations of cytoplasmic, in pancreatic β -cells without participation of the thapsigargin-sensitive store, 165
- Bile flow and hormone-induced Ca^{2+} influx in the perfused rat liver, nickel as an agent for investigating the relation between, 214
- Book reviews
- Calcium regulation by calcium binding proteins, 569
- Calcium waves, gradients and oscillations. Ciba Foundation, 455
- Rubicon - the fifth dimension of biology, 86

C

- Ca^{2+} and vision (Special issue of collected papers and reviews), 253-352
- Ca^{2+} -ATPase, binding of ADP to SR, in the absence of Mg^{2+} is specifically inhibited by thapsigargin, 557
- Ca^{2+} binding proteins (Book review), 569
- Ca^{2+} (cytosolic) mobilization in mouse C2C12 myotubes, acetylcholine-activated inward current induces, 41
- Ca^{2+} channel, hormone-regulated, in rat hepatocytes revealed by whole cell patch clamp, 19

- Ca^{2+} concentrations using Fura-2 and lifetime-based sensing, possibility of simultaneously measuring low and high, 64
- Ca^{2+} cycling, do NO and cGMP play a role in? (short review), 207
- Ca^{2+} flux in retinal rod and cone outer segments: differences in Ca^{2+} selectivity of the cGMP-gated ion channels and Ca^{2+} clearance rates, 285
- Ca^{2+} homeostasis (abnormal) in Duchenne muscular dystrophy myotubes contracting in vitro, 177
- in vertebrate retinal rod outer segments, 322
- Ca^{2+} influx
- activation of, by transforming Ha-ras, 120
- role of mitogen-induced, in the control of the cell cycle in Balb-c 3T3 fibroblasts, 542
- Ca^{2+} mobilization and entry induced by extracellular ATP in the non-sensory epithelial cell of the cochlear lateral wall, 89
- Ca^{2+} pools in Ehrlich carcinoma cells. A major, high affinity Ca^{2+} pool is sensitive to both inositol 1,4,5-trisphosphate and thapsigargin, 174
- Ca^{2+} release induced by InsP_3 , slow kinetics of: differences between uni- and bi-directional $^{45}\text{Ca}^{2+}$ fluxes, 100
- Ca^{2+} stores
- in invertebrate photoreceptors, structure and cellular physiology of, 342
- (subplasmalemmal) of probable relevance for exocytosis in Paramecium, 87
- Ca^{2+} , Sr^{2+} and Ba^{2+} , glucose induces oscillations of cytoplasmic, in pancreatic β -cells without participation of the thapsigargin-sensitive store, 165
- Ca^{2+} pump
- activity in Jurkat T cells, protein kinase C modulates cytosolic free calcium by stimulating, 526
- (plasma membrane) - a physiological perspective on its regulation (Review), 459
- (sarcolemmal), inhibition of the, in embryonic chick heart cells by mini-glucagon, 76
- Ca^{2+} regulation by calcium binding proteins (Book review), 569
- Ca^{2+} signalling
- calbindin- $\text{D}_{28\text{K}}$ facilitates cytosolic calcium diffusion without

- interfering with, 187
 the whoosh and trickle of, (Meeting report), 245
 Ca^{2+} stores from the pancreatic acinar cell, isolation of subcellular agonist-sensitive, 364
 Ca^{2+} transients, voltage control of, elicited by caffeine and tetracaine, 140
 Ca^{2+} waves, gradients and oscillations. Ciba Foundation (Book review), 455
 cADP-ribose antagonist does not inhibit secretagogue-, caffeine- and nitric oxide-induced Ca^{2+} responses in rat pancreatic β -cells, 411
Caffeine
 and tetracaine in cultured rat muscle cells, voltage control of calcium transients elicited by, 140
 secretagogue- and nitric oxide-induced Ca^{2+} responses in pancreatic β -cells (rat) are not inhibited by cADP-ribose antagonist, 411
 Calbindin- $\text{D}_{28\text{k}}$ facilitates cytosolic calcium diffusion without interfering with calcium signaling, 187
 Calcium transients (intracellular) in suctorian protozoa (*Trichophrya* spp.): correlation with spontaneous tentacle contractions, 51
 Calmodulin antagonists, addition of, to NRK cells during G1 inhibits proliferating cell nuclear antigen expression, 30
 Calpain inhibitor II (cell permeant), inhibition of secretion from isolated rat alveolar epithelial type II cells by, 1
 Cell cycle in Balb-c 3T3 fibroblasts, role of mitogen-induced calcium influx in the control of the, 542
cGMP
 and nitric oxide, role in calcium cycling (short review), 207
 -gated ion channels and Ca^{2+} clearance rates, Ca^{2+} flux in retinal rod and cone outer segments: differences in Ca^{2+} selectivity of the, 285
 in vascular myocytes is involved in activation of voltage-independent Ca^{2+} entry by noradrenaline, 505
 Cholecystokinin receptor in pancreatic acinar cells, protein kinase C activation inhibits receptor-evoked inositol trisphosphate formation and induction of cytosolic calcium oscillations by decreasing the affinity-state of the, 471
 Cochlear lateral wall, non-sensory epithelial cell of the, calcium mobilization and entry induced by extracellular ATP in the, 89
Confocal microscopy
 and co-loaded Fluo-3 and Fura-Red fluorescent probes, a study using, 377
 light activated calcium release in *Limulus* ventral photoreceptors as revealed by, 301
 growth factor-induced calcium waves in hepatocytes as revealed with rapid scanning, 495
 Contractions (potentiated) following multiple extrasystolic beats, contractile and intracellular Ca^{2+} decay in, 155
 Cytomegalovirus (human) modulates the Ca^{2+} response to vasopressin and ATP in fibroblast cultures, 111

D

- Drosophila* photoreceptors, phosphoinositide-mediated phototransduction in: the role of Ca^{2+} and *trp*, 256
 Duchenne muscular dystrophy myotubes contracting in vitro, abnormal calcium homeostasis in, 177

E

- Ehrlich carcinoma cells, high affinity Ca^{2+} pool is sensitive to both inositol 1,4,5-trisphosphate and thapsigargin, 174
 Excision-activated calcium channels in *Lymnaea* neurons, effects of the protein tyrosine phosphatase inhibitor phenylarsine oxide on, 400
Exocytosis
 and intracellular calcium concentration, simultaneous measurements of, with fluorescent indicators in single pituitary gonadotropes, 223
 in Paramecium, subplasmalemmal Ca^{2+} stores of probable relevance for, 87
 Extracellular ATP, calcium mobilization and entry induced by, in the non-sensory epithelial cell of the cochlear lateral wall, 89
 Extrasystolic beats (multiple), contractile and intracellular Ca^{2+} decay in potentiated contractions following, 155

F

- Fibroblasts (Balb-c 3T3), role of mitogen-induced calcium influx in the control of the cell cycle in, 542
 Fluo-3 and Fura-Red fluorescent probes (co-loaded), a study using laser scanning confocal microscopy and, 377
 Fluorescence microscopy (single cell), simultaneous measurement of $[\text{Ca}^{2+}]$ and secretion-coupled membrane turnover by, 440
 Fluorescent indicators for simultaneous measurements of exocytosis and intracellular calcium concentration in single pituitary gonadotropes, 223
 Fluorometric measurement of the intracellular free Ca^{2+} -concentration in the ciliate *Didinium nasutum* using Fura-2, 484
 Fura-2
 and lifetime-based sensing for simultaneously measuring low and high calcium concentrations, 64
 and Fura-2/AM, intracellular concentrations of, in vascular smooth muscle cells following perfusion loading of Fura-2/AM in arterial segments, 420
 Fura-Red and Fluo-3 fluorescent probes (co-loaded), a study using laser scanning confocal microscopy and, 377
 Furosemide, the effect of, on calcium ion concentration in myocardial cells, 135

G

- Glucagon (mini-), inhibition of the sarcolemmal Ca^{2+} pump, in embryonic chick heart cells by, 76
 Glucose induces oscillations of cytoplasmic Ca^{2+} , Sr^{2+} and Ba^{2+} in pancreatic β -cells without participation of the thapsigargin-sensitive store, 165
 Glycoprotein (human immunodeficiency virus type 1 (HIV-1) surface envelope) in human intestinal epithelial cells, intracellular calcium release induced by, 9
 Growth factor-induced calcium waves in hepatocytes as revealed with rapid scanning confocal microscopy, 495

H

- Ha-ras (transforming), activation of Ca^{2+} influx by, 120
 Hepatocyte growth factor-induced calcium waves in hepatocytes as revealed with rapid scanning confocal microscopy, 495

- Hepatocytes (skate), effects of Hg^{2+} on cytosolic Ca^{2+} in isolated, 429
- Hg^{2+} , effects of, on cytosolic Ca^{2+} in isolated skate hepatocytes, 429
- Hormone-induced Ca^{2+} influx and bile flow in the perfused rat liver, nickel as an agent for investigating the relation between, 214
- Hormone-regulated Ca^{2+} channel in rat hepatocytes revealed by whole cell patch clamp, 19
- Human immunodeficiency virus type 1 (HIV-1) enteropathy, putative mechanism for, 9
- surface envelope glycoprotein in human intestinal epithelial cells, intracellular calcium release induced by, 9

I

- IgG-induced Ca^{2+} oscillations in differentiated U937 cells; a study using laser scanning confocal microscopy and co-loaded Fluo-3 and Fura-Red fluorescent probes, 377
- inositol trisphosphate
- and thapsigargin, high affinity Ca^{2+} pool in Ehrlich carcinoma cells is sensitive to both, 174
 - formation and induction of cytosolic calcium oscillations, protein kinase C activation inhibits receptor-evoked, by decreasing the affinity-state of the cholecystokinin receptor in pancreatic acinar cells, 471
 - induced Ca^{2+} release, slow kinetics of: differences between uni- and bi-directional $^{45}Ca^{2+}$ fluxes, 100
 - receptor of *Xenopus* oocytes (review), 353
- Intracellular calcium concentration and exocytosis, simultaneous measurements of, with fluorescent indicators in single pituitary gonadotropes, 223

L

- Laser confocal microscopy
- and co-loaded Fluo-3 and Fura-Red fluorescent probes, a study using, 377
 - light activated calcium release in *Limulus* ventral photoreceptors as revealed by, 301
- Lifetime-based sensing and Fura-2 for simultaneously measuring low and high calcium concentrations, 64
- Ligand stoichiometry, observations on, 557
- Light activated calcium release in *Limulus* ventral photoreceptors as revealed by laser confocal microscopy, 301
- Limulus* ventral photoreceptors, light activated calcium release in, as revealed by laser confocal microscopy, 301
- Lymnaea* neurons, effects of the protein tyrosine phosphatase inhibitor phenylarsine oxide on excision-activated calcium channels in, 400

M

- Meeting report: The whoosh and trickle of calcium signalling, 245
- Membrane turnover (secretion-coupled) and $[Ca^{2+}]_i$, simultaneous measurement of, by single cell fluorescence microscopy, 440
- Mitogen-induced calcium influx, role of, in the control of the cell cycle in Balb-c 3T3 fibroblasts, 542
- Myo-inositol trisphosphate-dependent ion fluxes in cerebellar microsomes, characterization of the co-agonist

- effects of strontium and calcium on, 390
- Myocardial cells, the effect of furosemide on calcium ion concentration in, 135
- Myotubes
- (Duchenne muscular dystrophy) contracting in vitro abnormal calcium homeostasis in, 177
 - (mouse C2C12), acetylcholine-activated inward current induces cytosolic Ca^{2+} mobilization in, 41

N

- Nickel: an agent for investigating the relation between hormone-induced Ca^{2+} influx and bile flow in the perfused rat liver, 214
- Nitric oxide and cGMP, role in calcium cycling (short review), 207
- Nitric oxide-, caffeine- and secretagogue-induced Ca^{2+} responses in pancreatic β -cells (rat) are not inhibited by cADP-ribose antagonist, 411
- Noradrenaline, activation of voltage-independent Ca^{2+} entry by, involves cGMP in vascular myocytes, 505
- Nuclear antigen expression, addition of calmodulin antagonists to NRK cells during G1 inhibits proliferating cell, 30

P

- Pancreatic β -cells
- cADP-ribose antagonist does not inhibit secretagogue-, caffeine- and nitric oxide-induced Ca^{2+} responses in, 411
 - glucose induces oscillations of cytoplasmic Ca^{2+} , Sr^{2+} and Ba^{2+} in, without participation of the thapsigargin-sensitive store, 165
- Pancreatic acinar cells
- isolation of subcellular agonist-sensitive calcium stores from, 364
 - protein kinase C activation inhibits receptor-evoked inositol trisphosphate formation and induction of cytosolic calcium oscillations by decreasing the affinity-state of the cholecystokinin receptor in, 471
- Paramecium, subplasmalemmal Ca^{2+} stores of probable relevance for exocytosis in, 87
- Phenylarsine oxide (protein tyrosine phosphatase inhibitor) effects on excision-activated calcium channels in *Lymnaea* neurons, 400
- Phenylephrine-induced $[Ca^{2+}]_i$ oscillations in single intact rat hepatocytes, both activators and inhibitors of protein kinase C promote the inhibition of, 232
- Phosphoinositide-mediated phototransduction in *Drosophila* photoreceptors: the role of Ca^{2+} and *trp*, 256
- Phosphorylation with protein kinases modulates calcium loading of terminal cisternae of sarcoplasmic reticulum from skeletal muscle, 197
- Photoreceptor
- excitation (*Limulus*), distinguishing between roles for calcium in, 331
 - (invertebrate) structure and cellular physiology of Ca^{2+} stores in, 342
 - (*Limulus* ventral) light activated calcium release in, as revealed by laser confocal microscopy, 301
 - proteins by Ca^{2+} , control of, 314
- Phototransduction, phosphoinositide-mediated, in *Drosophila* photoreceptors: the role of Ca^{2+} and *trp*, 256
- Protein kinase C
- activation inhibits receptor-evoked inositol trisphosphate

formation and induction of cytosolic calcium oscillations by decreasing the affinity-state of the cholecystokinin receptor in pancreatic acinar cells, 471

both activators and inhibitors of, promote the inhibition of phenylephrine-induced $[Ca^{2+}]_i$ oscillations in single intact rat hepatocytes, 232

modulates cytosolic free calcium by stimulating calcium pump activity in Jurkat T cells, 526

Protein kinases, phosphorylation with, modulates calcium loading of terminal cisternae of sarcoplasmic reticulum from skeletal muscle, 197

Protozoa (suctorian, *Trichophrya* spp.), intracellular calcium transients in, correlation with spontaneous tentacle contractions, 51

R

Rapid scanning confocal microscopy, hepatocyte growth factor-induced calcium waves in hepatocytes as revealed with, 495

Retinal rod

and cone outer segments: differences in Ca^{2+} selectivity of the cGMP-gated ion channels and Ca^{2+} clearance rates, Ca^{2+} flux in, 285

Retinal rod outer segments (vertebrate), calcium homeostasis in, 322
cones and calcium, 275

Rubicon - the fifth dimension of biology (Book review), 86

S

Sarcolemmal Ca^{2+} pump, inhibition of the, in embryonic chick heart cells by mini-glucagon, 76

Sarcoplasmic reticulum

Ca^{2+} -ATPase in the absence of Mg^{2+} is specifically inhibited by thapsigargin, binding of ADP, 557
(terminal cisternae of) from skeletal muscle, phosphorylation with protein kinases modulates calcium loading of, 197

Secretagogue-, caffeine- and nitric oxide-induced Ca^{2+} responses in pancreatic β -cells (rat) are not inhibited by cADP-ribose antagonist, 411

Simultaneous measurement of $[Ca^{2+}]_i$ and secretion-coupled membrane turnover by single cell fluorescence microscopy, 440
exocytosis with fluorescent indicators in single pituitary gonadotropes, 223

Sr^{2+}

and calcium on *myo*-inositol trisphosphate-dependent ion fluxes in cerebellar microsomes, characterization of

the co-agonist effects of, 390
 Ca^{2+} and Ba^{2+} , glucose induces oscillations of cytoplasmic, in pancreatic β -cells without participation of the thapsigargin-sensitive store, 165

T

Tentacle contractions (spontaneous) and intracellular calcium transients, correlation with, 51

Tetracaine and caffeine in cultured rat muscle cells, voltage control of calcium transients elicited by, 140

Thapsigargin

inhibition of binding of ADP to SR Ca^{2+} -ATPase in the absence of Mg^{2+} , 557

-sensitive store, glucose induces oscillations of cytoplasmic Ca^{2+} , Sr^{2+} and Ba^{2+} in pancreatic β -cells without participation of the, 165

Trichophrya spp., intracellular calcium transients in suctorian protozoa: correlation with spontaneous tentacle contractions, 51

Tyrosine phosphatase inhibitor, effects of the protein, phenylarsine oxide on excision-activated calcium channels in *Lymnaea* neurons, 400

V

Vascular myocytes, activation of voltage-independent Ca^{2+} entry by noradrenaline involves cGMP in, 505

Vascular smooth muscle cells following perfusion loading of Fura-2/AM in arterial segments, intracellular concentrations of Fura-2 and Fura-2/AM in, 420

Vasopressin and ATP in fibroblast cultures, human cytomegalovirus modulates the Ca^{2+} response to, 111

Vision and calcium (Special issue of collected papers and reviews), 253-352

Visual transduction and adaptation in vertebrates and invertebrates, Ca^{2+} in, (preface), 253

Voltage control of calcium transients elicited by caffeine and tetracaine in cultured rat muscle cells, 140

Voltage-independent Ca^{2+} entry, activation of, by noradrenaline involves cGMP in vascular myocytes, 505

X

Xenopus oocytes, inositol trisphosphate receptor of (review), 353

Author Index to Volume 18

A

Ackrill K, 455
Agell N, 30
Allen JM, 377
Antonioti S, 452
Asoh H, 495
Atkinson J, 420
Atsma DE, 515

B

Baccino FM, 452
Bachs O, 30
Baghdiguian J, 9
Balasubramanyam M, 526
Ballatori N, 429
Barbiero G, 452
Baumann O, 342
Bellucci L, 420
Benedetti A, 174
Berrie CP, 232
Bezprozvanny I, 353
Bindels RJM, 187
Bock GR, 455
Bonelli G, 452
Bootman MD, 100
Bosch M, 30
Bosch RR, 471
Boyer JL, 429
Braun K, 569
Butler RD, 51
Bygrave FL, 207, 214

C

Campbell AK, 86
Capdeville-Atkinson C, 420
Carlile GW, 364

Casteels R, 100, 111
Champeil P, 390
Chandler R, 197
Cheung JY, 19
Claret M, 390
Cobbold PH, 232
Cognard C, 177
Collett VJ, 440
Combettes L, 390
Coquil J-F, 390
Cuthbertson KSR, 51

D

Dayanithi G, 9
De Clercq E, 111
De Jonge HW, 515
De Pont JHHM, 471
De Smedt H, 100, 111
Duport G, 177
Duszynski J, 19

E

Elensky M, 19
Elliot AC, 455
Eusebi F, 41
Evans RL, 51
Evans WH, 364

F

Fantini J, 9
Fitzsimmons T, 364
Fleischer S, 197

Floto RA, 377
Fukami K, 223
Fulceri R, 174
Furukawa M, 89

G

Gallione A, 411
Gamberucci A, 174
Gardner JP, 526
Garner KM, 471
Giovannelli A, 41
Giunti R, 174
Grapenglosser E, 165
Grassi F, 41
Grégoire G, 505
Grunicke HH, 120
Guillou C, 177
Gylfe E, 165

H

Hannaert-Merah Z, 390
Hansen O, 557
Hardie RC, 256
Hartog A, 187
Hayashi Y, 495
Heizmann CW, 569
Hellman B, 165
Hidalgo J, 140
Himpens B, 111

I

Ikebuchi Y, 223
Ikeda K, 89
Imbert N, 177

J

Jaimovich E, 140
Jensen J, 557

K

Karjalainen A, 214
Kato T, 495
Kawanishi T, 495
Kessler-Icekson G, 135
Kindler E, 120
Klauke N, 87
Koch K-W, 314
Kojima S, 155
Korenbrodt JI, 285
Koster HPG, 187

L

LaNoue KF, 19
Lakowicz JR, 64
Lamers JMJ, 515
Länge S, 87
Lemaire FX, 100
Leroy P, 420
Limatola C, 41
Lisman JE, 331
Liu L, 1
Liu YJ, 165
Loirand G, 505
López-Girona A, 30
Lovisolo D, 452

M

McCrohan CR, 51
Machemer H, 484
McNaughton PA, 275
Mahaut-Smith MP, 377
Maly K, 120
Marcolongo P, 174
Mariwalla K, 429
Masumoto N, 223
Mattei E, 41
Mauger J-P, 390
Mayreleiner M, 197
Milbourne EA, 207
Minke B, 256
Missiaen L, 100
Miyake A, 223
Mizuki J, 223
Mornose K, 495

Monteith GR, 459
Munaron L, 452
Murphy CT, 245

N

Nathanson MH, 429
Navon G, 135
Neyts J, 111
Nicolas A, 420
Niemeyer MI, 140

P

Pacaud P, 505
Pafford CM, 400
Pandolfi SJ, 364
Parmley WW, 155
Parys JB, 100, 353
Pavoine C, 76
Payne R, 301
Pecker F, 76
Pernberg J, 484
Plattner H, 87
Poll CT, 245
Proot P, 111

R

Ragozzino D, 41
Raymond G, 177
Richard EA, 331
Robert A, 420
Rothwell NJ, 569
Roufogalis BD, 459
Rubin Y, 135

S

Sampat P, 331
Sauvadet A, 76
Schindler H, 197
Schnetkamp PPM, 322
Schoeffield-Payne M, 364
Schofield JG, 440
Shorte SL, 440
Sienaert I, 100
Simples Jr JE, 400
Smeets RLL, 471
Smith PA, 411
Somasundaram B, 377
Somlyo AV, 253

Sorrentino V, 174
Stafford SJV, 440
Strong JA, 400
Suzuki M, 89
Swillens S, 390
Szmacinski H, 64

T

Takahashi M, 495
Takasaka T, 89
Tarroni P, 174
Tasaka K, 223
Tillotson DL, 19
Tinhofer I, 120
Toyoda K, 495
Tran NNP, 420

U

Ukhanov K, 301
Uneyama C, 495

V

Van Heugten HAA, 515
Van Mackelenbergh MGH, 471
Van Os CH, 187
Van der Laarse A, 515
Van der Valk-kokshoorn EJM, 515

W

Walz B, 253, 342
Wang M, 1
Westwick J, 245
Wikman-Coffelt J, 155
Willems PHGM, 471
Willmott NJ, 411
Wu ST, 155

Y

Yahi N, 9,

Z

Zimmerman U-JP, 1

